MOTION ESTIMATION USING PREDETERMINED PIXEL PATTERNS AND SUBPATTERNS

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ABSTRACT OF THE DISCLOSURE

A method and system is provided for calculating motion vectors of macroblocks in a digital image of a digital video stream. The method and system reduces the computational overhead of calculating motion vectors computing difference measures using a predetermined pattern of pixels in each macroblock rather than all the pixels of the macroblock. Reduction of computational overhead can be further enhanced first using a subpattern, i.e., a sub-sample of the predetermined pattern on a subset of the macroblocks to determine close matching macroblocks and then using the predetermined pattern to determine the best matching macroblock from within the close matching macroblocks.